Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_

**Cell Analogy Project**

As we now know, floating around in the cytoplasm of a cell are small structures called organelles. Like the organs in your own body, each one carries out a specific function necessary for the cell to survive. In order to survive, the cell must be able to interact with its surroundings, use energy, produce materials and manage waste. You will create a model or poster that compares a living plant or animal cell and its organelles to a city, school, factory, etc. The place you choose must use energy, produce substances and manage waste. The organelles will represent the parts of your place that carry out these processes. Your model or poster must include a creative title with the word “cell” somewhere in it, and be included on the answer key page. It must have the shape of a plant or animal cell (depending on which cell you choose to represent). All the parts of the “city, etc.” should be labeled with the cell part and the analogy you chose to represent it (put parentheses around the cell part). Your model or poster must me colorful, neat and creative, and should include all the organelles listed below.

**Part 1: Choose your cell type (plant or animal) and an analogy for your cell and its parts**

* Choose whether you will be creating an analogy of a plant or animal cell
* Choose what your overall analogy will be (city, school, factory, etc) and the analogies for all the organelles

**Part 2: Work with group members to create your model or poster of your cell**

* Decide what materials are needed and who is responsible for bringing each item
* Work with group members to assemble your model or create your poster
* Work on creating a separate “key” for your cell analogy that includes the title of your model or poster, the analogy part, cell part, analogy job, and cell actual job

**Part 3: Present your final presentation to the class**

* Prepare a five minute presentation on your cell model or poster to present to the class
* Turn in a your separate “key” for your cell analogy (this should include the title of your model or poster, the analogy part, cell part, analogy job, and cell actual job)

The following 11 organelles (depending on which type of cell you choose) must be included in order to receive full credit!

|  |  |
| --- | --- |
| **Animal Cell** | **Plant Cell** |
| Cell membrane | Cell membrane |
| Cytoplasm | Cytoplasm |
| Nucleus | Nucleus |
| Nuclear envelope | Nuclear envelope |
| Ribosome | Ribosome |
| Endoplasmic Reticulum | Endoplasmic Reticulum |
| Mitochondria | Mitochondria |
| Golgi Apparatus | Golgi Apparatus |
| Vacuole | Vacuole |
| Centriole | Chloroplasts |
| Lysosomes | Cell wall |